REMARKS

By this amendment, claims 1-25, 28, 30-34 and 36 are amended, claims 37-55 are added and together with original claims 26, 27, 29 and 35 are submitted for consideration in view of the remarks following.

Applicants note with appreciation the allowance of claim 12 if rewritten in independent form including the limitation of the base and any intervening claim.

In the Office Action, the Examiner rejected claims 3, 5, 6, 8, 9, 15, 25 and 30 under 35 USC 112, second paragraph, as being indefinite; rejected claim 1 for misspelling; rejected claims 1-3, 7-9, 13-23 and 36 under 35 USC 102(b) as anticipated by Sperber (US Patent No. 5,661,801); rejected claims 24-35 under 35 USC 102(e) as anticipated by Oguro (US Patent No. 5,907,655); rejected claims 4 and 5 under 35 USC 103(a) as unpatentable over Sperber as applied to claim 1 and further in view of Ishimaru (US Patent No. 4,993,774); and rejected claim 6, 10 and 11 under 35 USC 103(a) as unpatentable over Sperber as applied to claim 1 and further in view of Holcombe (US Patent No. 5,864,591).

Applicants have amended the title to more clearly define the invention. Basis for the amendment is found in page 2, lines 16-17; page 5, lines 6-9; page 9, lines 12-14; etc.

With regards to the rejection of claims 3, 5, 6, 8, 9, 15, 25 and 30 under 35 USC 112, second paragraph, applicants have amended claims 6 and 25 to replace the term "about" with the term "in the region" while variously deleting the term "about" from claims 3, 5, 8, 15 and 30. Thus claims 6 and 25 recite "in the region of" such as accepted by the Examiner in claim 8; namely "...in the region of the blanking level." Claim 9 has been amended to delete the term "almost" and recite instead "that partially defeats the effects of the copy protection signals."

In addition, claim 1 has been amended to delete the term "therebetween."

Accordingly, applicants respectfully submit that the claims 1, 3, 5, 6, 8, 9, 15, 25 and 30 particularly point out and distinctly claim the subject matter of the invention.

With regards to the rejections based on the cited references, applicants respectfully submit that the cited references to Sperber, Oguro, Ishimaru and/or Holcombe, taken alone or in any combination, fail to anticipate, or to make obvious, the present invention as disclosed in the specification and set forth in the claims 1-55 of this amendment.

To illustrate, referring to the rejection of claims 1-3, 7-9, 13-23 and 36, Sperber fails to disclose or remotely suggest the features of the present invention as set forth in, for example, the independent claims 1, 16 and 36 and/or in the claims 2-3, 7-9, 13-15, 17-23 variously dependent upon the claims 1 and 16. The present invention discloses a method and apparatus for providing a position separation between a leading pseudo sync pulse, and a respective following AGC pulse, of a pseudo sync/AGC pulse pair. Sperber on the other hand is concerned with increasing the amplitude of a portion of the video signal while passing the pseudo sync and AGC pulses unchanged. In an alternative embodiment, the pseudo sync and AGC pulses in Sperber are attenuated in relation to the normal sync pulses. See the Abstract in Sperber which states: "In a first embodiment, the horizontal sync pulses are amplified to eliminate jitter in the signal due to confusion with the chrominance or color burst signal," and then continues with, "In another embodiment, all portions of the signal are amplified and the portions of the signal corresponding to pseudo sync and AGC pulses are attenuated to their normal 1 volt peak-to-peak. The result of the present invention is such as to reestablish the normal horizontal sync pulse to its normal level, to put the color burst in its proper ratio and to increase the video dynamic range."

Thus, Sperber is not remotely concerned with creating a position separation between a sync and/or pseudo sync pulse and a respective AGC pulse of a sync/AGC pulse pair or a pseudo

sync/AGC pulse pair. In direct contrast to Sperber, the technique of the present invention is not concerned with changing the amplitude of the horizontal sync pulses, or of the video signal, or of reestablishing the normal horizontal sync pulse to its normal level. In the techniques of the present invention, the amplitude levels of the horizontal sync or pseudo sync pulses, or of the AGC pulses, are not an issue and are not changed.

More particularly, in Fig. 1B of Sperber, a copy protection signal is shown as a series of pseudo sync pulses 32 followed immediately after with respective AGC pulses 34. Each pseudo sync pulse 32 and respective (i.e., following) AGC pulse 34 form a pulse pair. In Sperber, each pulse pair is separated by a gap between the AGC pulse 34 and a following pseudo sync pulse 32 of a succeeding pulse pair, but not a position separation between the pseudo sync pulse 32 and the respective AGC pulse 34 which follows the pseudo sync pulse. To the contrary, Sperber discloses the technique wherein the horizontal sync pulse 11 in Figure 1B, is enlarged or increased in amplitude as shown in Figure 1C to provide a normal horizontal sync pulse 11'. By increasing the amplitude of the horizontal sync pulses while not increasing the amplitude of the pseudo sync pulses 32 and AGC pulses 34, the copy protection signal is reduced in effectiveness.

The present invention on the other hand, creates a gap, that is, a position separation within a pulse pair. To this end, given a pseudo sync pulse 32, the respective AGC pulse 34 does not immediately follow in the present invention. Instead, a position separation is created following the pseudo sync pulse 32 prior to the respective AGC pulse 34. It is pointed out that Sperber fails to disclose or suggest any of this type of modification in his drawings, descriptions, figures, and schematics.

In addition, it should be noted that in Sperber the Figures 2, 4 and 5 all show circuitry for modifying a copy protected signal as described in the Abstract and Summary of the Invention.

That is, Figures 2, 4, and 5 disclose systems which boost the amplitude level of the horizontal sync signal relative to the pseudo sync/AGC pulses, as shown in Figure 1C of Sperber.

More specifically, with regards to the rejection of claims 1-3, 7-9, 13-23 and 36, it is respectfully submitted that all of the passages referred to by the Examiner fail to disclose or suggest the features of the present invention as set forth in the rejected and new claims. This fact is unavoidable considering the fact that the subject matter disclosed in Sperber is totally unrelated to the subject matter of the present invention, as described and claimed. As discussed above, the present invention is concerned with providing a position separation between sync or pseudo sync pulses and respective AGC pulses of each sync/pseudo sync/AGC pulse pair. Sperber, to the contrary, is concerned with increasing the amplitude of a portion of the video signal (e.g. horizontal sync) while passing the pseudo sync and AGC pulses of the pulse pair unchanged, i.e., with the same original spacing between them. Sperber fails to contain a single sentence which remotely suggests creating a position separation between a sync or pseudo sync pulse and the respective AGC pulse of the pulse pair.

To illustrate, as to claim 1, the passage in Col. 7, lines 5-27 cited by the Examiner actually describes a timing circuit that shunts the video input signal to the sync separator for selected lines periods after the video input's post equalizing pulses. As stated in Col. 7, lines 26-27, "Of course, this shunting prevents any signal from being detected by sync separator 215 during the indicated periods." Thus, there is no mention of position separation between a trailing edge of sync or pseudo syncs to the following leading edge of respective AGC pulses.

To continue, the passage in Col. 5, line 20 to Col. 6, line 6 actually describes keeping the gain of the color burst lower with respect to horizontal sync (HS) to avoid playability problems. As stated in Col. 5, lines 56 to 58, "Thus the gain when the color burst is present can be set to

bring the color burst signal down to its normal range with regard to a normal HS signal (Fig. 1C)." See Fig. 1C of Sperber and color burst 26 and horizontal sync, 11'. So here again there is no mention of a position separation between a pseudo sync and following respective AGC pulse.

As to claims 2, 3, the passage in Col. 8, line 53 to Col. 6, line 9 as cited by the Examiner is confusing as there appears to be a typographical error since the passages cited are out of order. Regardless, Col. 8, line 53 states: "A window pulse from gate 412, the inverted version of the signal illustrated in Fig. 3N..." And, Col. 6, line 9 describes color burst information "...changing the level of the color burst information in conjunction with a video tape that has been encoded with pseudo sync and AGC pulses allows for the timing of the chroma phase..." Thus, again there is no mention of position separation between a pseudo sync pulse and its respective AGC pulse.

As to claim 7, the passage in Col. 8, lines 30-52 describes a horizontal sync pulse amplitude detector for measurement means. Col. 8, lines 43 to 46 states: "Because of the timing generated in NAND gate 420, this peak detector is effective to measure sync level in the eight lines after VBI and copy protection signals." Thus there is no mention of narrowing of sync/pseudo sync pulses and or AGC pulses and or shifting of relative positions of sync/pseudo syncs relative to respective AGC pulses.

As to claim 8, the passage in Col. 3, lines 7-21 describes a standard TV signal and does not remotely suggest position shifting at all.

As to claim 9, the passage in Col. 3, lines 47-58 describes boosting the horizontal sync (HS) pulse. This passage in Col. 3, lines 47-48 states: "According to the present invention, the HS pulses are boosted..." There is no mention of delaying AGC pulses because Col. 3, lines 54 and 55 states: "...the pseudo sync and AGC pulses are retained unaltered..."; that is, no position

separation is created between the pseudo sync pulse and the respective AGC pulse, as is variously set forth in the present claims 1-55.

As to claim 13, contrary to the Examiner's conclusion, Sperber fails to suggest position modulating AGC pulses while maintaining the modified position separation between a normal sync pulse and its respective AGC pulse. The reasons have been fully discussed above.

As to claim 14, the passage at Col. 4, lines 37-46 only describe the arrangement of NAND gate 212 and flip-flops 214, which provides a positive going window surrounding eleven lines in the VBI that include pseudo sync and AGC pulses... etc. There is no mention of reversing the order of at least portions of the sync/pseudo sync and respective AGC pulses.

As to claim 15, the passage at Col. 3, lines 26-46 discuss reducing the HS pulse tips from peak norm of –40 IRE to about –28 IRE and maintaining the color burst at about 40 IRE, thereby causing picture instability. Lines 41-43 recite "Further, the compressed HS may contribute to a shift in color tint in the picture." Ergo, there is no mention of phase shifting at least portions of the sync/pseudo sync pulses with respect to the respective AGC pulses.

As to claim 16, and as fully discussed above, Sperber does not disclose or even suggest "shifting the relative edges and/or positions of the AGC pulses and of the sync/pseudo sync pulses with respect to each other so as to provide a further (i.e., modified) position separation there between... to reduce or defeat the effects...," as concluded by the Examiner referring to the Fig. 5 and accompanying description in Col. 9, lines 10-47. Fig. 5 discloses instead an unrelated technique and circuitry for boosting the entire video signal, and then the portions of the signal corresponding to pseudo sync and added AGC pulses are attenuated to provide their normal level, i.e., 1 volt peak to peak. See Col. 9, lines 12-15 and 40-43. There is no mention or capability in the discussion and circuit of Fig. 5 for "shifting a position of the sync/pseudo sync

pulses relative to a position of the respective AGC pulses... to provide a modified position separation... etc.," as recited in claim 16.

As to claim 17, the Fig. 4 referred to by the Examiner fails to disclose the combination of circuits in the arrangement set forth in the claim 17 and described in the present application, particularly for providing a modified position separation between the trailing edge of the sync or pseudo sync pulse and the leading edge of respective AGC pulses, which is a sufficient separation to reduce or defeat the effects of copy protection signals. The circuit of Fig. 4 automatically detects the horizontal sync signal so as to enable correction (i.e., boosting) of the detected horizontal sync signals. Sperber fail to disclose circuits for detecting copy protection pulses and then for inserting delayed AGC pulses to generate an increased position separation between the sync/pseudo sync pulses and the respective AGC pulses.

As to claim 18, the monostable multivibrator of Sperber in Fig. 4 provides a pulse or window that is about eight video lines in width (Col. 8, lines 19-24 and 27-29). It follows that Sperber does not disclose a defeat signal which causes further position separation, nor a switching means for inserting the defeat signal... to modify the widths of the sync/pseudo sync pulses and respective AGC pulses, in the passage in Col. 8, lines 11-29 as contended by the Examiner.

As to claim 19, the passage at Col. 5, line 20 to Col. 6, line 6, concerns varying the gain via an amplifier during the presence of the color burst signal to thereby reduce the color burst signal down to its normal range with regard to a normal HS signal (Col. 5, lines 56-64). There is no suggestion as recited in claim 19 of circuit means for reinserting color burst into the unprotected video signal via a switching means during the modifying of the pulses' widths. For example, the copy protection pulse widths in Sperber are not modified.

As to claim 20, the Fig. 5 and accompanying description fail to remotely suggest a memory and/or read and write signals which control the memory to recover the copy protected video signal in reverse order to provide reversed pulse pairs having the modified position separation... etc. None of these features are implied in the Fig. 5 description.

As to claim 21, the arguments above with regard to claim 20 also apply here. In addition, the description of Fig. 5 (Col. 9, lines 10-48) fail to suggest implementing the reversing process in selected portions of all or a selected plurality of the copy protection pulses. Sperber fail to even suggest determining selected portions of all or a selected plurality of sync/pseudo sync and/or respective AGC pulses.

As to claim 22, Fig. 5 and description of Sperber fail to disclose or suggest an inverting amplifier/phase shifter means for providing inverted/phase shifted sync/pseudo sync and AGC pulses, or means for replacing the original pulses with the inverted/phase shifted pulses so as to provide an increased position separation. Fig. 5 does not remotely suggest these features as claimed.

As to claim 23, Sperber fail to suggest means for level shifting/attenuating inverted/phase shifted sync/pseudo sync and respective AGC pulses in response to a second control voltage. As in claim 22 above, Sperber fail to disclose means for inverting or phase shifting sync/pseudo sync pulses and respective AGC pulses, and fail to suggest increasing a position separation.

As to claim 36, as discussed fully above, Sperber fail to suggest position separation of a sync/pseudo sync pulse relative to a respective AGC pulse of pulse pairs, and therefore must fail to disclose a specified amount of position separation. Col. 5, line 20 to Col. 6, line 6 does not disclose any process or means for providing a specific position separation between sync/pseudo sync pulses and respective AGC pulses, as fully discussed above.

With regards now to the rejection of claims 24-35 under 35 USC 102(e) as anticipated by Oguro (U.S. 5,907,655) it is respectfully submitted that Oguro, as Sperber, fails to disclose or suggest the features of the invention as recited in claims 24-35.

As to claim 24, Oguro also fails to remotely disclose or suggest generating any position separation between a sync or pseudo sync pulse and its respective AGC pulse. Contrary to the Examiner's conclusion, Col. 7, lines 31-39 does not remotely suggest providing a position separation between sync/pseudo sync pulse and its respective AG pulse, and thus does not in any way suggest dynamically increasing the position separation to reduce or defeat the effects of the copy protection. Likewise, Col. 10, lines 20-28 does not suggest decreasing the position separation back to the small to zero position separation which re-establishes the copy protection. There is no mention of any type of position separation between selected pulses.

Col. 7, lines 31-39 discusses the effects of a color stripe system on a television set, and that the provision of the two flags AG and CS determines whether both the AGC system and the color stripe system is used for copy protection, or whether only one of them is adopted.

Col. 10, lines 20-28 discusses the manner of storing a copy protection signal in selected horizontal lines of selected number of lines, wherein the number of lines can be increased or decreased.

Accordingly, it is readily apparent that the subject matter discussed in the two citations by the Examiner bears no resemblance to the features of the present invention described and claimed in claim 24, et seq.

As to claim 25, Col. 7, lines 22-39 of Oguro is descriptive of Fig. 15 and is concerned with the VAUX control pack which contains AG and CS flags which, as discussed above, determine whether an AGC system and/or a color stripe system is adopted as copy protection.

There is no mention whatsoever of small or increased position separation between a sync/pseudo sync pulse and its respective AGC pulse, as recited in claim 25.

As to claim 26, the Fig. 27 and accompanying description of Oguro generates line data for a line pack processing micro-computer which forms data as shown in Fig. 22 and routes the data to the format converter of Fig. 25. Neither the circuit nor the description remotely suggest a position separation between a sync/pseudo sync pulse and a respective AGC pulse, and accordingly cannot suggest dynamically varying the position separation by varying the advancement of the trailing edge of the sync/pseudo sync pulses with respect to the respective AGC pulse.

As to claim 27, Oguro also fails to suggest the alternative situation (of claim 26) in which the leading edge of the AGC pulse is dynamically varied to correspondingly vary the position separation between the sync/pseudo sync pulses and respective AGC pulses. The delay circuit of Fig. 17 does not delay an AGC pulse leading edge, but delays instead the input composite video signal. See Col. 11, lines 43-46.

As to claims 28 and 29, as discussed above with respect to claims 26, 27, the Fig. 17 and its description concern subject matter which does not remotely relate to the position separation technique of the present invention nor to the fact that the position separation is dynamically varied by selected manipulation of the sync/pseudo sync pulses (for example leading edges). Oguro in Fig. 17 discloses a copy protection signal embodying pseudo sync and AGC pulses wherein the pulse levels are selectively changed to disable regular recording. See Col. 7, lines 52-55 and 59-62.

As to claim 30, the citation by the Examiner in Col. 10, lines 20-28, discuss that the copy protection signal is stored in selected positions in first and second fields and in selected

horizontal lines, e.g., eight lines at the top and bottom of a field. This subject matter is not remotely related to the dynamic narrowing step of claim 30.

As to claim 31, a review of Fig. 29 and accompanying description of Oguro fails to reveal subject matter which generate modulated inverted pseudo sync pulses and AGC pulses that vary in width and position delay in response to the modulated inverted pseudo sync pulses. Fig. 29 likewise fails to suggest means for adding to the video signal a dynamic copy protection signal formed of the pseudo sync pulses and respective position modulated AGC pulses. The above features are set forth in the claim 31.

As to claims 32 and 33, the description in Oguro Col. 8, lines 1-50 (and Fig. 17) disclose a process of sampling the copy protection signal, digitizing the sampled signal and then packing the digital signal in the pack structure of the Oguro process. There is no mention of providing inverted pseudo sync pulses (the pseudo sync pulses in Fig. 17 are normal negative going pulses), no mention of AGC pulses of varying width and position, and no mention of means responsive to the inverted pseudo sync pulses and width and position varying AGC pulses to provide position modulated AGC pulses relative to pseudo sync pulses and thus a dynamically varying copy protected signal. The only variation in Oguro is the AGC pulse level (amplitude) changes as shown for example in Fig. 17 and disclosed in Col. 7, lines 52-55 and 59-62.

As to claims 34 and 35, Oguro in the manner of Sperber fails to suggest, and has no intention of employing, the technique of the present invention of generating any position separation between the sync or pseudo sync pulses and the respective AGC pulses (of each pulse pair) and/or of dynamically position, pulse width and/or gap width modulating the particular pulses over time from maximum and back to minimum gap separation. Ergo, the arguments

presented above with respect to Sperber also apply to Oguro, as has been repeatedly argued herein.

Thus applicant respectfully submits that Sperber and/or Oguro fail to suggest, or even intend, the combination of the invention as recited in the claims 1-3, 7-9, 13-23, 24-35 and 36 submitted herein. It has consistently been held by the courts that an anticipating reference under 35 USC 102 must disclose every material element of the claimed invention, that is, must identically describe applicant's invention, and must, together with the knowledge of one of ordinary skill in the art, enable the practice of the invention. See, for example, In re Arkley, 172 USPQ 525 (CCPA 1972); In re Marshall, 198 USPQ 344 (CCPA 1978); Kalman v. Kimberly-Clark, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983); Jamesbury Corp. v Litton Industrial Products Inc., 756 F.2d at 1560, 225 USPQ 253, 256 (Fed. Cir. 1985).

It is respectfully submitted that Sperber and/or Oguro fail to identically describe applicant's invention as claimed, and further fail to enable one skilled in the art to practice the claimed invention from Sperber and/or Oguro alone, as is required under 35 USC 102, without re-inventing Sperber and/or Oguro by exertion of his own inventive skill, and/or without recourse to the teachings of this application, for the reasons fully discussed above.

With regards now to the rejection of claims 4 and 5 under 35 USC 103(a) as unpatentable over Sperber and further in view of Ishimaru (U.S. 4,933,774), as to claims 4 and 5 Sperber fail to suggest any modification of the small position separation between sync or pseudo sync pulses and respective AGC pulses. Ishimaru on the other hand fails to suggest providing an advancement of 1.0 to 2.5 microseconds of the sync/pseudo sync pulses relative to the leading edge of the respective AGC pulses, as contended by the Examiner. Ishimaru in Fig. 4, and Figs. 5b and 5c and accompanying descriptions discloses instead a technique for controlling a field

memory and accordingly is concerned with insuring the presence of vertical sync signals, not the manipulation of horizontal sync (or pseudo sync) pulses relative to respective AGC pulses. Ergo, the waveforms of Figs. 5b, 5c are concerned with a vertical time period V, wherein the vertical sync pulse has a trailing edge delayed a time period T1 which is approximately equal to $7 \pm 2H$ (where H equals one line of 63.5 microseconds), that is, 127 ± 7 microseconds. See Col. 4, lines 42-45 (et. seq.), and Col. 4, line 64 to Col. 5, line 8. The horizontal sync pulse Sh is used only to increment the address accessed in the field memory each horizontal line. No advancement is made in the manner of claims 4 and 5. See Col. 4, lines 59-64. Obviously, Ishimaru fails to remotely suggest the features of claims 4 and/or 5.

It follows that there would be no motivation to combine Ishimaru and Sperber and that such a combination, if possible, would be inoperative since Ishimaru is concerned with vertical sync and the associated much larger time periods, while the system of Sperber is mainly concerned with copy protection signals involving pseudo sync and AGC pulses in horizontal lines. Neither of the cited references are concerned with or suggest the manipulation of position separation between a sync or pseudo sync pulse and its respective AGC pulse to correspondingly manipulate the effects of copy protection.

Finally, with regards to the rejection of claims 6, 10 and 11 under 35 USC 103 as unpatentable over Sperber in view of Holcombe (U.S. 5,864,591), applicant fails to find in Holcombe any mention of sync/pseudo sync pulses in combination with respective AGC pulses. The delay circuit in Fig. 6 of Holcombe receives an input signal from an infrared photodiode via a bandpass filter and comparator. There is no mention of sync/pseudo sync pulses or respective AGC pulses defining a copy protection signal. Ergo, there is no mention in Holcombe of advancing the trailing edge of sync/pseudo sync pulses while delaying respective AGC pulses a

selected time period. The delay in Fig. 6 delays the entire incoming signal and makes no mention of advancing any sync/pseudo sync pulse and/or of delaying any related AGC pulse for specific time periods. Further, Holcombe fails to suggest or imply manipulating a position separation of any kind.

Since Holcombe is concerned with suppressing the effect of feedback from the output to the input of a receiver, and is not remotely concerned with copy protection processes and makes no mention of sync/pseudo sync and/or AGC pulses, there would be no motivation for modifying Sperber by the teachings of Holcombe to derive the method and apparatus of the present invention. For example, the description in Col. 8, lines 23-34 is not remotely related to applicant's invention.

The new claims 37-55 recite further features of the present invention of claims 1-36, which further features are disclosed in the specification as filed. Basis for the claims 37-55 thus is as follows.

Claim Number	Basis in Application
37	Page 5, lines 5-15 and Page 9, lines 10-15
38	Page 5, lines 5-15 and Page 9, lines 10-15
39, 40	Figs. 2-4, 5b-e, 6b, d, e, 7a-e, 8b, 9b, c, disclose positive and negative going pulses
41	Page 8, lines 10-15
42	Carved from claim 30
43	Page 9, lines 20-21
44	Page 15, lines 22-25
45	Page 6, lines 20-21
46	Page 9, lines 20-21 and Page 10, lines 3-12
47	Page 15, lines 22-25
48	Page 15, lines 22-25
49	Page 5, lines 20-24 and Page 15, lines 22-25
50	Page 8, lines 10-15

51, 52	Page 15, lines 22-25
53, 54	Page 16, lines 8-13
55	Page 16, lines 1-7

It is respectfully submitted that the claims 37-55 likewise are not anticipated by the cited references for reasons discussed above.

Accordingly, applicant respectfully submits that the cited references to Sperber, Oguro, Ishimaru and/or Holcombe taken alone or in combination, fail to anticipate the features of the present invention as described and claimed in claims 1-55 presented herewith and that such claims are in condition for allowance, which action is earnestly solicited.

If the Examiner finds differences which could be resolved by telephone interview, applicant can be reached by phone at (408) 562-8496.

Respectfully submitted,

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